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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/668,219

09/24/2003

Masami Saito

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1585

466

7590

03/08/2005

YOUNG & THOMPSON  
745 SOUTH 23RD STREET  
2ND FLOOR  
ARLINGTON, VA 22202

EXAMINER

SEVER, ANDREW T

ART UNIT

PAPER NUMBER

2851

DATE MAILED: 03/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/668,219

Applicant(s)

SAITO, MASAMI

Examiner

Andrew T. Sever

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 17 December 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 7-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 7-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 September 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Allowable Subject Matter***

1. The indicated allowability of claim 1-5 and 7-14 (as well as claim 16, which has been incorporated into claim 15) is withdrawn in view of the newly discovered reference(s) to Sakuma et al. (US 6,292,305). Rejections based on the newly cited reference(s) follow.

### ***Claim Objections***

2. Claim 13 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Claim 13 claims intended use of an apparatus, however the courts have held that the manner of operating the device does not differentiate apparatus claims from the prior art. See *Ex parte Masham*, 2 USPQ2d 1647 and MPEP 2114. Therefore claim 13 only claims the desk of claim 12.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 2, 4, 5, 9, 10, and 12-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Sakuma et al. (US 6,292,305.)

Sakuma teaches in figure 8 and figure 20, a desk provided with a projector (10), wherein the projector is underneath a work surface on a top of the desk, and light output from the projector is reflected by a mirror (20) and projected in front of the desk (see embodiment of figure 8 which shows the projected light projecting beyond the front edge of the desk (the front being considered the edge of 24 anything beyond 24 including a large portion of reflector 26)), and

Wherein all of the light output from said projector passes from underneath the work surface and beyond a front of the top of the desk.

*With regards to applicant's claim 2:*

Although mirror 20 does not appear to be aspherical, it is specified to be bent and other embodiments such as figure 3b and 6 show the mirror that the projector immediately projects upon is aspherical (concave.)

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*With regards to applicant's claim 4:*

The mirror is underneath the work surface.

*With regards to applicant's claim 5:*

Part of the top of the desk is cut off (the portion through which the image is projected through.)

*With regards to applicant's claim 9:*

A screen (26) is arranged in front of the desk in figure 8.

*With regards to applicant's claim 10:*

Inherently the size of the picture projected would be varied according to the set-up position of the screen (in respect to the projector and/or mirror.)

*With regards to applicant's claims 12 and 13:*

Sakuma teaches a computer in column 17 lines 39-56. (With regards to claim 13 Ex parte Masham 2 USPQ2d 1647 as well as In re Schreiber 128 F. 3d 1473, 1477-78, 44 USPQ2d 1429.)

*With regards to applicant's claim 14:*

See above.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sakuma et al. (US 6,292,305) as applied to claims 1, 2, 4, 5, 9, 10, and 12-14 above, and further in view of Yavitz et al. (US 5,699,225.)

As described in more detail above Sakuma teaches a desk which has a projector the projects light out through the top of the desk. Sakuma does not specifically teach a transparent plate over the area where the light is output from the desk. Yavitz teaches in figure 5 part 52 which is a glass plate (a transparent plate) over the output from the desk. Yavitz teaches several advantages to having such a plate in column 3 lines 13-26; such that the plate can further modify the projected image also it is well known that such a plate keeps dust from getting into the projector. Accordingly it would have been obvious to one of ordinary skill in the art at the time the invention was made to include a transparent plate as taught by Yavitz such that the light output from the projector passes through the transparent plate in the desk of Sakuma.

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7. Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakuma et al. as applied to claims 1, 2, 4, 5, 9, 10, and 12-14 above, and further in view of Kepley, JR et al. (US 5,999,232.)

As described in more detail above Sakuma teaches a desk provided with a projector, however Sakuma does not teach that the projector is movable, specifically rotatable. Kepley teaches in figure 1 a projection system, which uses a reflector (22) and a projector (20). Kepley further teaches in figures 4 and 5 that the projector is mounted in such a way that it is rotatable. Kepley teaches in column 5 lines 44-60 that this allows for easy access to the projector in order to change light bulbs and odd other sorts of maintenance as well as ordinary optical alignment of the projector with the mirrors and screen. Accordingly, since all projectors need this kind of maintenance, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include the kind of mounting mechanism taught by Kepley in the system taught by Sakuma.

8. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sakuma et al. as applied to claims 1, 2, 4, 5, 9, 10, and 12-14 above, and further in view of Idaszak et al. (US 6,530,667.)

As described in more detail above, Sakuma teaches a desk, which among other things includes a screen, however Sakuma's screen is positioned above the top of the desk. Idaszak teaches in figure 7 a desk based projection device, which includes a screen 112, which is partially positioned below the desk. (See figure 12, which shows part of the

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image, is also projected below the desk.) Idaszak teaches that the hemispherical screen, which includes projected areas below the top of the desk allows for the simulation of a real environment in such things as a flight simulator. Accordingly it would have been obvious to one of ordinary skill in the art to provide a screen and projection system projects the picture below the top of the desk of Sakuma, allowing for a more realistic simulation or display which includes images below the horizon (the desk surface) as is known in the simulation arts.

9. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sakuma as applied to claims 1, 2, 4, 5, 9, 10, and 12-14 above, and further in view of Chino et al.

As described in more detail above Sakuma teaches a desk including a projector and screen, however Sakuma does not teach that the projector is movable by rolling members. Chino teaches in column 1 lines 52-57 that it is useful to include casters so that a projector/screen combination such as that of Sakuma is more portable. Since in an office environment, which is where the desk of Sakuma would frequently be deployed, it is highly useful if the furniture can be easily moved. It would have been obvious to one of ordinary skill in the art at the time the invention was made to include casters on the bottom of the desk of Sakuma so that it can easily be moved.



*Response to Arguments*

10. Applicant's arguments with respect to claims 1-5 and 7-15 have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew T. Sever whose telephone number is 571-272-2128. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on 571-272-2258. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AS



Alan A. Mathews  
Primary Examiner